

What is claimed is:

1. An implant to be inserted in the disc space between two adjacent vertebrae for the correction of the vertebral spine curvature comprising a configuration (lateral view) that is basically a wedge or acute-angled isosceles trapeze, wherein the area opposite the shorter base or opposite to the vertex is a rounded pyramid-like surface, and the upper and lower surfaces of the trapeze include fixation means to the vertebral plates of the adjacent vertebrae.
2. The implant of claim 1, comprising an area opposite the vertex that is a rounded pyramid-like surface, that is not centered, but laterally shifted to one side.
3. The implant of claim 1, comprising fixation means as protuberances capable of penetrating into the vertebral mass through the surface of the vertebral plates, and such protuberances are saw-shaped (curved) extended along the width of the upper and lower surfaces and oriented to prevent horizontal slipping in the direction of the anterior portion of the vertebrae.
4. The implant of claim 1, comprising a hollow volume inside it and holes in its surfaces, being said holes communicated with said hollow volume for the insertion of osteosynthesis material and to enable and facilitate the osteosynthesis.
5. The implant of claim comprising:
 - a) an area opposite the vertex that is a rounded pyramid-like surface laterally shifted to one side;
 - b) fixation means as protuberances capable of penetrating into the vertebral mass through the surface of the vertebral plates, and such protuberances being saw-shaped (curved) extended along the width of the upper and lower

surfaces and oriented to prevent horizontal slipping in the direction of the anterior portion of the vertebrae;

c) a hollow volume inside it and holes in its surfaces, being said holes communicated with said hollow volume for the insertion of osteosynthesis material and to enable and facilitate the osteosynthesis.

6. The implant of claim 5, comprising a hollow cavity in a threaded tunnel shape, which opening is in the posterior surface of the implant, for the insertion of tools suitable for handling through a posterior access.

7. The implant of claim 5, comprising a hollow cavity having a threaded tunnel shape, which hole is in any of the two lateral surfaces, and in the area opposite the vertex, for the insertion of tools suitable for handling through a lateral access.

8. A method for producing an increase in the vertebral spine curvature by using the implant of claim 1, comprising the following steps:

- a. releasing the access and handling area to a determined intervertebral space;
- b. preparing the intervertebral space to receive the implant;
- c. placing the implant with its vertex towards the posterior area of the vertebral column, and the rounded area towards the anterior area of the vertebral column, without protruding from the perimeter of the vertebral bodies and said vertex being completely positioned in the posterior end of the intervertebral space and enabling the existence of free space in the anterior area of the intervertebral space;
- d. exerting a posterior compression force of the vertebral bodies over the upper and lower surfaces of the implant, using said implant as fulcrum for this operation, so that an angle open towards the anterior area of the vertebral column is formed and said angle being bigger than the previously existing one.

- e. placing the osteosynthesis material;
- f. fixing the vertebrae by means of external fixation means.
- g. placing the osteosynthesis material in the intervertebral space.

9. The method of claim 8, wherein the method comprises a compression force that is exerted by means of the pressure exerted over pedicular screws placed on the vertebrae forming the intervertebral space.

10. The method of claim 9, comprising the use of pedicular screws as an external fixation means, fixing said screws to bars or plates and immobilizing said assembly with nuts or other fixation means.

11. The method of claim 8, wherein the method comprises the release of the access and operation area to the intervertebral space consists in the osteotomy of the articular apophysis and the spine apophysis of both vertebrae, following a line skimming the surface determined by the vertebra edge corresponding to the affected intervertebral space, an wedge-shaped osteotomy on the spine apophysis of the lower vertebra, wherein the angle determined by the cutting line of the spine apophysis of the lower vertebra and the cutting line of the spine apophysis of the upper vertebra, is an angle similar to the correction angle that will be obtained between the two vertebral bodies and corresponding to the angle formed by the upper and lower surfaces of the implant.

12. The method of claim 8, wherein the method comprises the preparation of the intervertebral space to receive the implant consists in moving the dura mater tubes and the rachidian nerve to one side, thereby exposing part of the intervertebral disc; carving a window in the disc, and emptying the disc with suitable instruments; performing the same two steps in the opposite side; cleaning the soft and cartilaginous disc tissues of the vertebral plates

through the carved windows; separating the adjacent vertebrae in a delicate and progressive way with appropriate instruments.

13. The implant of claim 1, wherein the angle formed by the upper and lower surfaces is of at least 10 degrees, preferably between 18 and 70 degrees, more preferably between 18 and 47 degrees, most preferably 18 degrees, 29 degrees and 47 degrees..

14. The implant of claim 13, wherein its length is not greater than 20 mm and its minimum height is of 8 mm and its maximum height is of 30 mm depending on the angle to be achieved and size of the vertebrae.

15. The implant of claim 5, wherein it is made of metal, titanium alloy, biocompatible material, or any other material suitable for said purpose.

16. An implant to be inserted in the disc space between two adjacent vertebrae for the correction of the vertebral spine curvature wherein its configuration (lateral view) is basically a wedge or acute-angled isosceles trapeze, wherein the area opposite the shorter base or opposite to the vertex is a rounded pyramid-like surface, and the upper and lower surfaces of the trapeze include fixation means to the vertebral plates of the adjacent vertebrae; the area opposite the vertex that as a rounded pyramid-like surface laterally shifted to one side; the fixation means as protuberances capable of penetrating into the vertebral mass through the surface of the vertebral plates, and such protuberances being saw-shaped (curved) extended along the width of the upper and lower surfaces and oriented to prevent horizontal slipping in the direction of the anterior portion of the vertebrae; and includes a hollow volume inside it and holes in its surfaces, being said holes communicated with said hollow volume for the insertion of osteosynthesis material and to enable and facilitate the osteosynthesis.

17. The implant of claim 16, wherein it includes a hollow cavity in a threaded tunnel shape, which opening is in the posterior surface of the implant, for the insertion of tools suitable for handling through a posterior access.

18. The implant of claim 16, wherein it includes a hollow cavity having a threaded tunnel shape, which hole is in any of the two lateral surfaces, and in the area opposite the vertex, for the insertion of tools suitable for handling through a lateral access.

19. The implant of claim 16, wherein the angle formed by the upper and lower surfaces is of at least 10 degrees, preferably between 18 and 70 degrees, more preferably between 18 and 47 degrees, most preferably 18 degrees, 29 degrees and 47 degrees..

20. The implant of claim 16, wherein its length is not greater than 20 mm and its minimum height is of 8 mm and its maximum height is of 30 mm depending on the angle to be achieved and size of the vertebrae.

21. The implant of claim 16, wherein it is made of metal, titanium alloy, biocompatible material, or any other material suitable for said purpose

22. The implant of claim 16, wherein the angle formed by the upper and lower surfaces is of 18 degrees.

23. The implant of claim 16, wherein the angle formed by the upper and lower surfaces is of 29 degrees.

24. The implant of claim 16, wherein the angle formed by the upper and lower surfaces is of 47 degrees.

25. A method for producing an increase in the vertebral spine curvature by using the implant of claim 1, comprising the following steps:

a. the release of the access and operation area to the intervertebral space consisting in the osteotomy of the articular apophysis and the spine apophysis of both vertebrae, following

a line skimming the surface determined by the vertebra edge corresponding to the affected intervertebral space, an wedge-shaped osteotomy on the spine apophysis of the lower vertebra, wherein the angle determined by the cutting line of the spine apophysis of the lower vertebra and the cutting line of the spine apophysis of the upper vertebra, is an angle similar to the correction angle that will be obtained between the two vertebral bodies and corresponding to the angle formed by the upper and lower surfaces of the implant;

b. the preparation of the intervertebral space to receive the implant consisting in moving the dura mater tubes and the rachidian nerve to one side, thereby exposing part of the intervertebral disc; carving a window in the disc, and emptying the disc with suitable instruments; performing the same two steps in the opposite side; cleaning the soft and cartilaginous disc tissues of the vertebral plates through the carved windows; separating the adjacent vertebrae in a delicate and progressive way with appropriate instruments.;

c. placing the implant with its vertex towards the posterior area of the vertebral column, and the rounded area towards the anterior area of the vertebral column, without protruding from the perimeter of the vertebral bodies and said vertex being completely positioned in the posterior end of the intervertebral space and enabling the existence of free space in the anterior area of the intervertebral space;

d. exerting a posterior compression force of the vertebral bodies over the upper and lower surfaces of the implant, using said implant as fulcrum for this operation, so that an angle open towards the anterior area of the vertebral column is formed and said angle being bigger than the previously existing one.

e. placing the osteosynthesis material;

f. producing a compression force that is exerted by means of the pressure exerted over pedicular screws placed on the vertebrae forming the intervertebral space;

- g. use of pedicular screws as an external fixation means, fixing said screws to bars or plates and immobilizing said assembly with nuts or other fixation means;
- h. placing the osteosynthesis material in the intervertebral space.